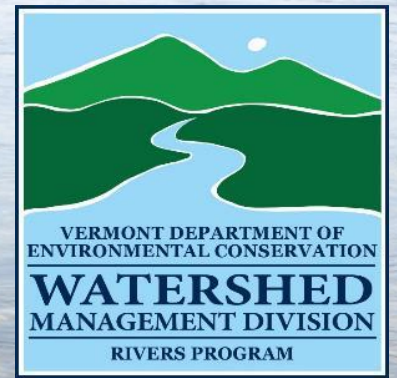


FEMA FIRM Updates & Updating Municipal Bylaws



Floodplain & River Corridor Regulations

Prepared for the Addison County Regional
Emergency Management Committee Meeting
May 8, 2024

Kyle Medash

Western VT Floodplain Manager
River Corridor & Floodplain Protection Program
VT Agency of Natural Resources (VTANR)

Flood Ready

VERMONT STATE FLOODPLAIN MANAGEMENT PROGRAM ROLE

Training, Education &
Outreach

Permitting:
FHARC rule
(state facilities, ag,
Power transmission &
generation)

Technical Support:
Act 250 review and
Recommendations
under Criterion 1D

Municipal support:
Post-flood permitting
and damage
assessment assistance

Municipal support:
Recommended model
regulations for
communities

Municipal support:
Review floodplain
development for
compliance (24 VSA
§4424)

Come to discuss opportunities to make

BASIC CONCEPTS

Google Search: "Flood Training"

Taken from the Vermont Flood Training site:
<https://floodtraining.vermont.gov/>



Communities must **adopt, implement & enforce** flood hazard area regulations

Protection of public safety



Photo credit: Bob Fitch @farminvt, from Montpelierlive.com

Reduce future flood damages & suffering

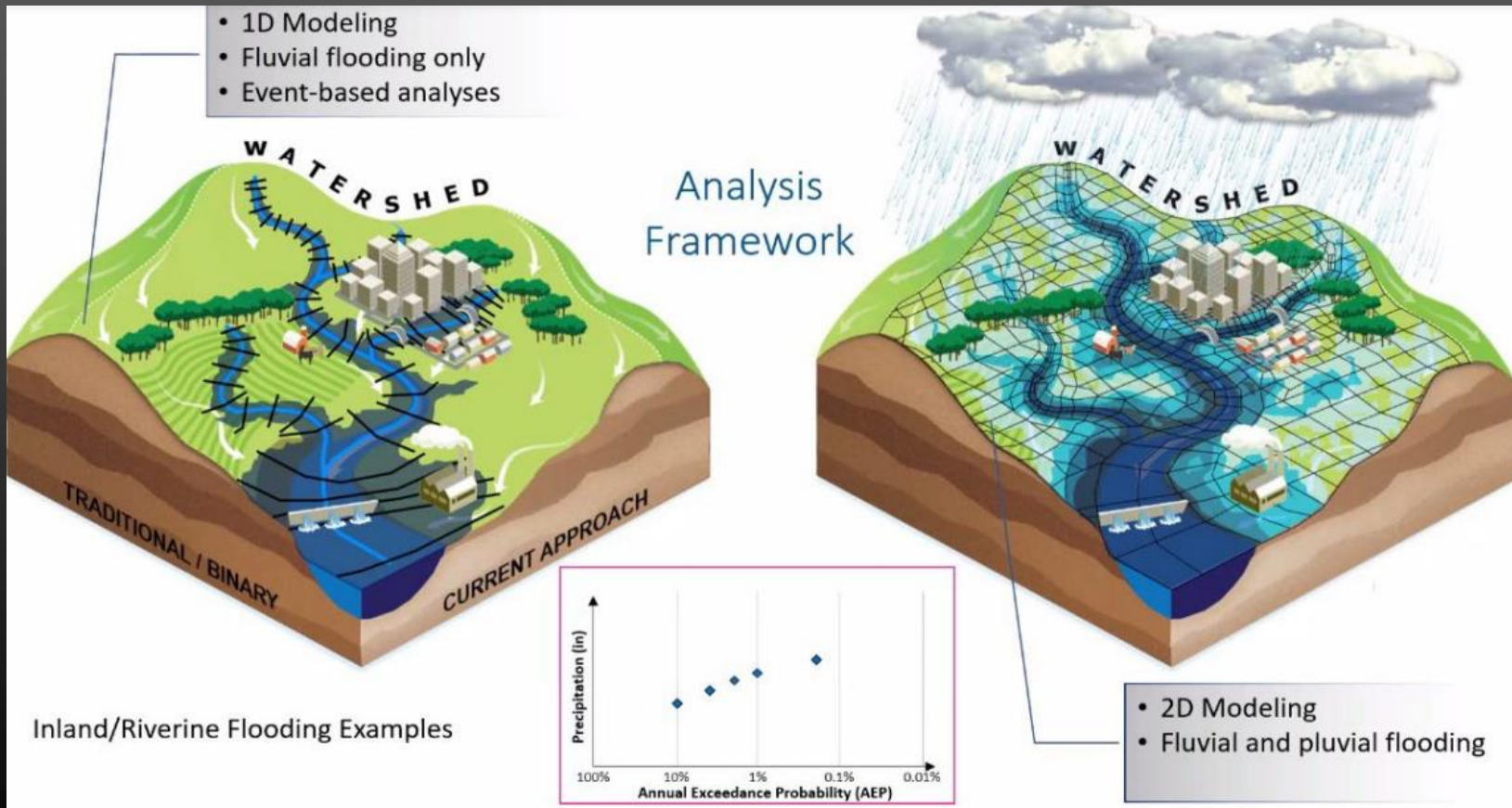


Photo credit: VT AOT

FEMA FIRM UPDATES

ADDISON COUNTY - OTTER CREEK WATERSHED

- NEW MAPS ARE COMING! – CURRENT EFFECTIVE MAPS DATE BACK TO 1985 OR EARLIER
- WORKMAPS EXPECTED TO BE RELEASED SUMMER 2024. STILL TIME TO SUBMIT DATA!
- ZONE A BASED ON 2D BLE; ZONE AE REMAPPED BASED ON LIDAR 1' CONTOURS
- NEW DETAILED STUDY ON NEW HAVEN RIVER



COMMUNITY BYLAW UPDATE PROCESS

- MOST TOWNS WILL LIKELY NEED UPDATE DUE TO TIME SINCE LAST FIRM UPDATE
- IMPORTANT TO IDENTIFY TIMELINE & PROCESS FOR COMMUNITY ENGAGEMENT
- A VALID, UNEXPIRED, MUNICIPAL OR LOCAL HAZARD MITIGATION PLAN IS NEEDED TO ADOPT BYLAWS.
- IF PLAN NEEDS UPDATING/AUSTRALIAN BALLOT ADOPTION – PROCESS COULD TAKE ~3 YEARS.
- MODEL BYLAWS AVAILABLE FROM DEC; ACCOUNT FOR MORE TIME IF DRAFTING NEW OR EDITING PREVIOUS VERSIONS.
- BYLAW UPDATE DEADLINE OF WINTER 2027

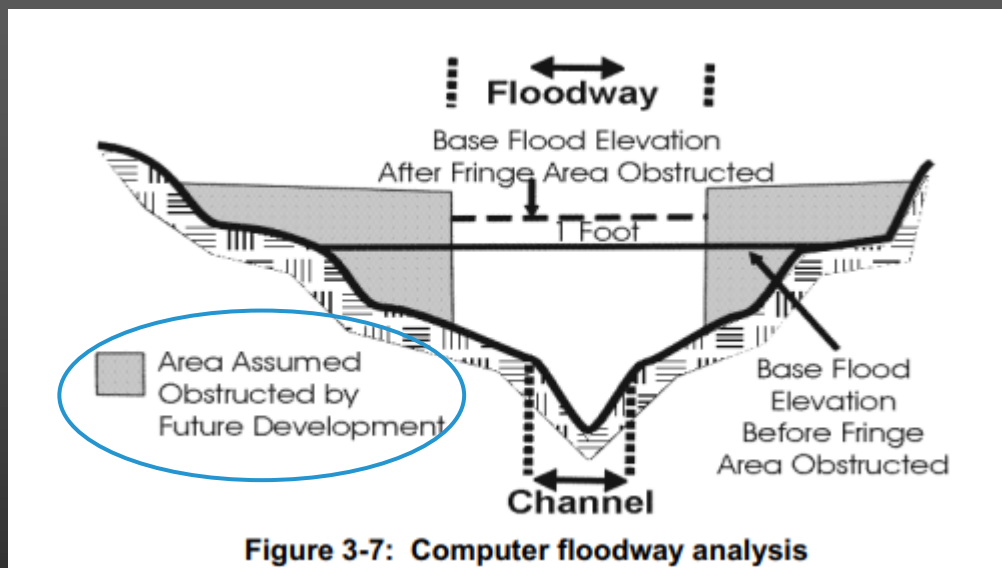
Every Municipality has different flood hazard standards

Over 80% of Vermont towns have higher flood hazard standards

Many only minimally exceed FEMA minimum requirements

FEMA minimum standards ALLOW for new development to increase flood heights

FEMA minimum standards DO NOT protect floodplain function



From FEMA 480: NFIP Floodplain Management Requirements Desk Reference

VT DEC MODEL BYLAW (2022 STAND ALONE)

- STAND ALONE VERSION CREATED FOR TOWNS W/O ZONING AS A STARTING PLACE
- PRE-APPROVED BY FEMA
- FLOODPLAIN HIGHER STANDARDS AND RIVER CORRIDOR REGULATION ARE IN LINE WITH STANDARDS FOR ACT 250, STATE FHARC PERMIT STANDARDS (STATE FACILITIES, AG, FORESTRY) & S248/CPG PROJECTS (UTILITIES).
- CONSISTENT REVIEW/APPROVAL OF PROJECTS AT ALL LEVELS OF REVIEW (MUNICIPAL OR STATE)

Municipal Assistance

- [Hazard Area Bylaws](#)
- [DEC Review of Municipal Permit Applications](#)
- [DEC Floodplain Managers](#)

Hazard Area Bylaws

Vermont DEC has prepared model regulations for communities to work with. They have been pre-reviewed by FEMA and meet or exceed the requirements of the National Flood Insurance Program. In addition, adoption and enforcement of Section D, River Corridors, qualifies communities for enhanced cost share under the [Emergency Relief and Assistance Fund](#).

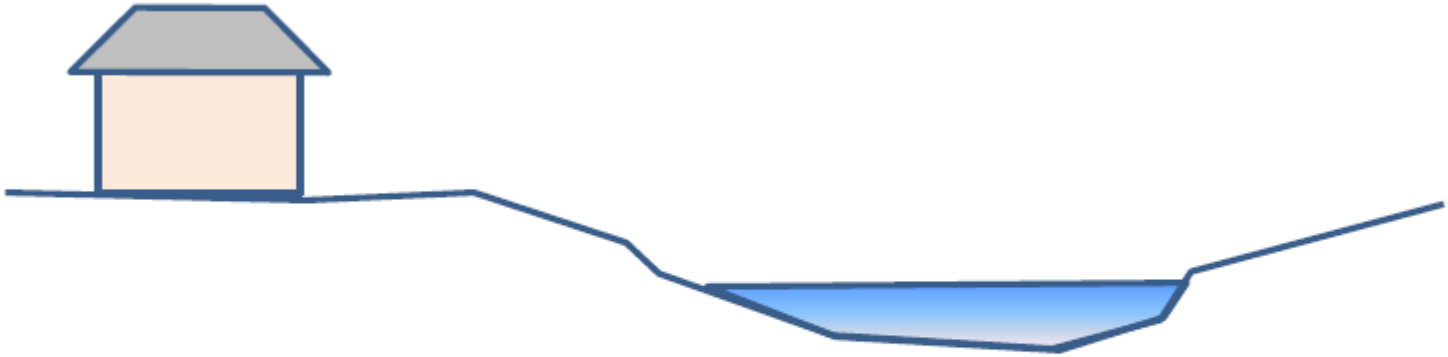
[2022 VT Model Stand Alone Flood Hazard Bylaw](#)

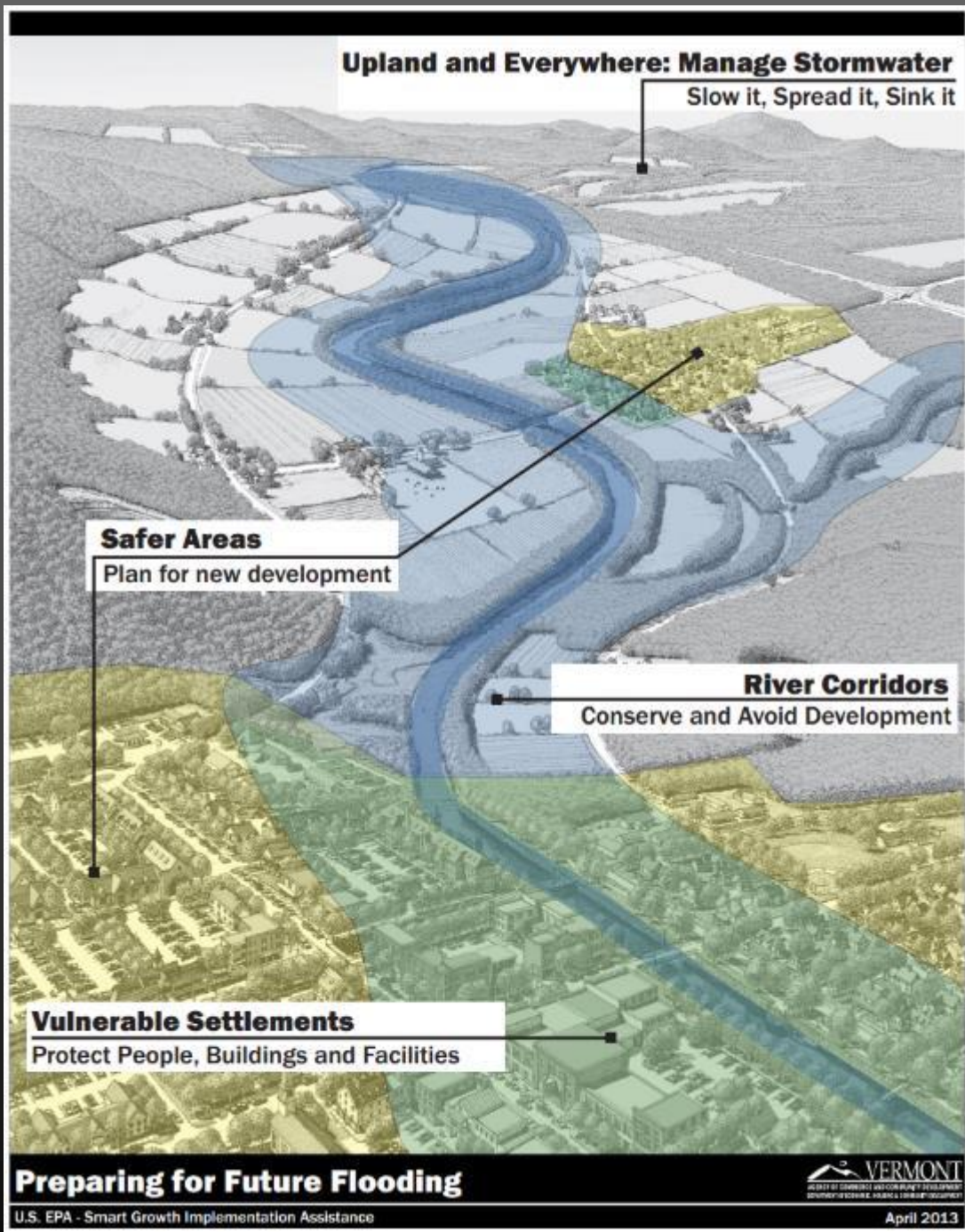
- [2022 Annotated VT Model Stand Alone Flood Hazard Bylaw](#)

<https://dec.vermont.gov/watershed/rivers/river-corridor-and-floodplain-protection/municipal-assistance>

HIGHER FLOOD STANDARDS IN VT DEC MODEL BYLAW

- ELEVATE THE LOW FLOOR TO 2' ABOVE THE BFE. (VS. AT BFE)
- SUBSTANTIAL IMPROVEMENT CALCULATED CUMULATIVELY OVER 3 YEARS
- PROHIBITS NEW CRITICAL FACILITIES AND MATERIAL STORAGE/JUNKYARDS IN THE SFHA.
- PROHIBITS NEW STRUCTURES IN THE FEMA FLOODWAY.
- CLEARLY DEFINES EXEMPT/PERMITTED/CONDITIONAL USE ACTIVITIES.
- NAI/NO FILL/NO NET LOSS OF FLOOD STORAGE (COMPENSATORY STORAGE)





A Resilient Landscape has space for dynamic natural processes

A Resilient Community can learn and adapt

The Flood Resilience Checklist for Vermont Communities at:
https://floodready.vermont.gov/update_plans

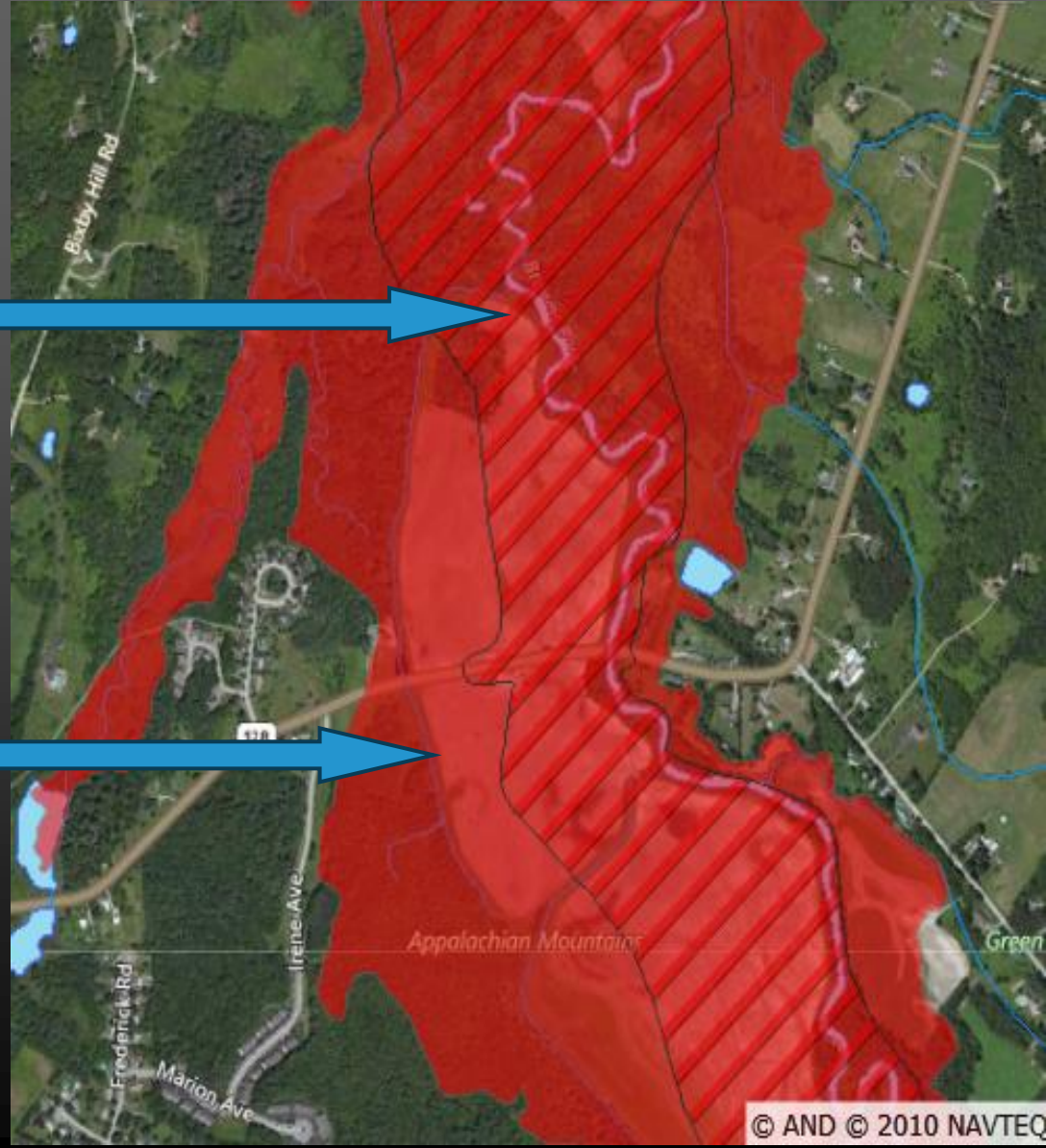
NO ADVERSE IMPACT (NAI) STANDARDS: INUNDATION

FEMA Floodways

NO INCREASE IN BASE FLOOD
ELEVATION OR *VELOCITY*

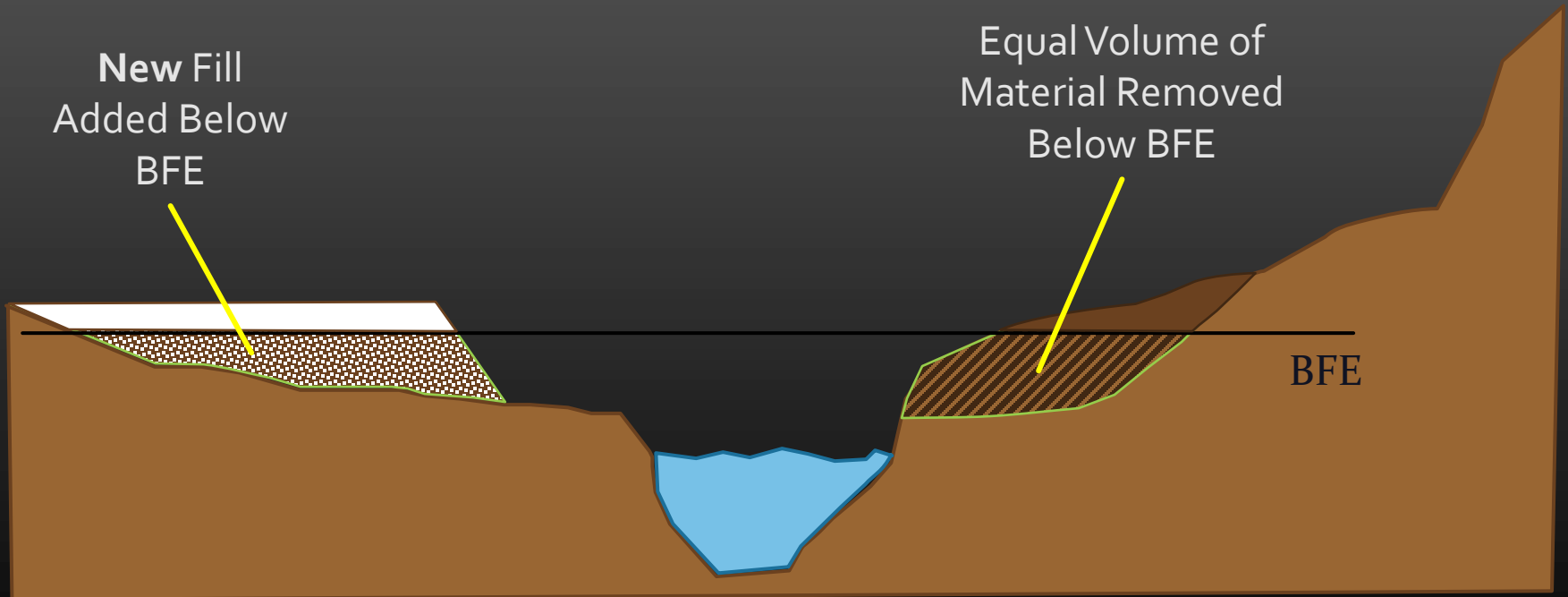
Entire Flood Hazard Area

- NO LOSS OF FLOOD STORAGE VOLUME
- STRUCTURES ELEVATED 2' ABOVE BFE
- CRITICAL FACILITIES ELEVATED TO THE 0.2% ANNUAL CHANCE FLOOD ELEVATION



NO ADVERSE IMPACT (NAI) STANDARDS: INUNDATION

COMPENSATORY STORAGE IN FLOOD FRINGE



NO ADVERSE IMPACT (NAI) STANDARDS: RIVER CORRIDOR



BUILD NO CLOSER TO THE RIVER
WHERE DEVELOPMENT EXISTS

Preserve space still available



PROTECT THE ROOM NEEDED BY THE RIVER.

NO NEW STRUCTURES *EXCEPT* WHERE NO CLOSER TO THE STREAM BANK THAN AN EXISTING STRUCTURE.

- **IN-FILL (BETWEEN EXISTING DEVELOPMENT), OR**
- **SHADOWED - BEHIND OR DOWN STREAM OF EXISTING DEVELOPMENT)**

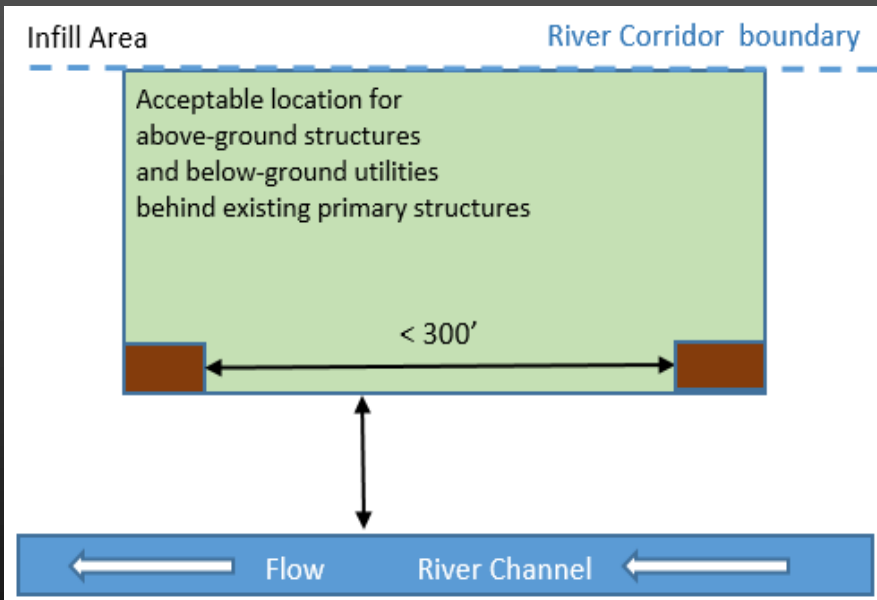


Figure 1: In-fill Development Standard

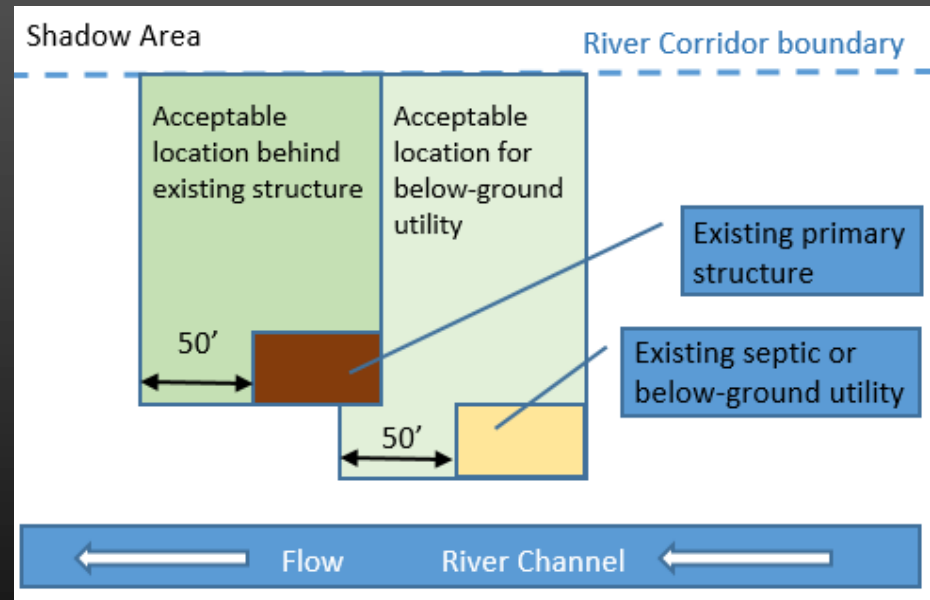


Figure 2: Shadow Area Development Standard

EXEMPTED ACTIVITIES IN RIVER CORRIDORS

- REMOVAL OF BUILDINGS
- ANY CHANGES TO STRUCTURES THAT DO NOT INCREASE FOOTPRINT
- MAINTENANCE OF EXISTING SIDEWALKS, ROADS, PARKING AREAS, STORMWATER DRAINAGE, BRIDGES, CULVERTS, CHANNEL STABILIZATION
- FUNCTIONALLY DEPENDENT USES (CROSSINGS)
- PLANTING PROJECTS
- SUBDIVISION THAT DOES NOT INVOLVE DEVELOPMENT

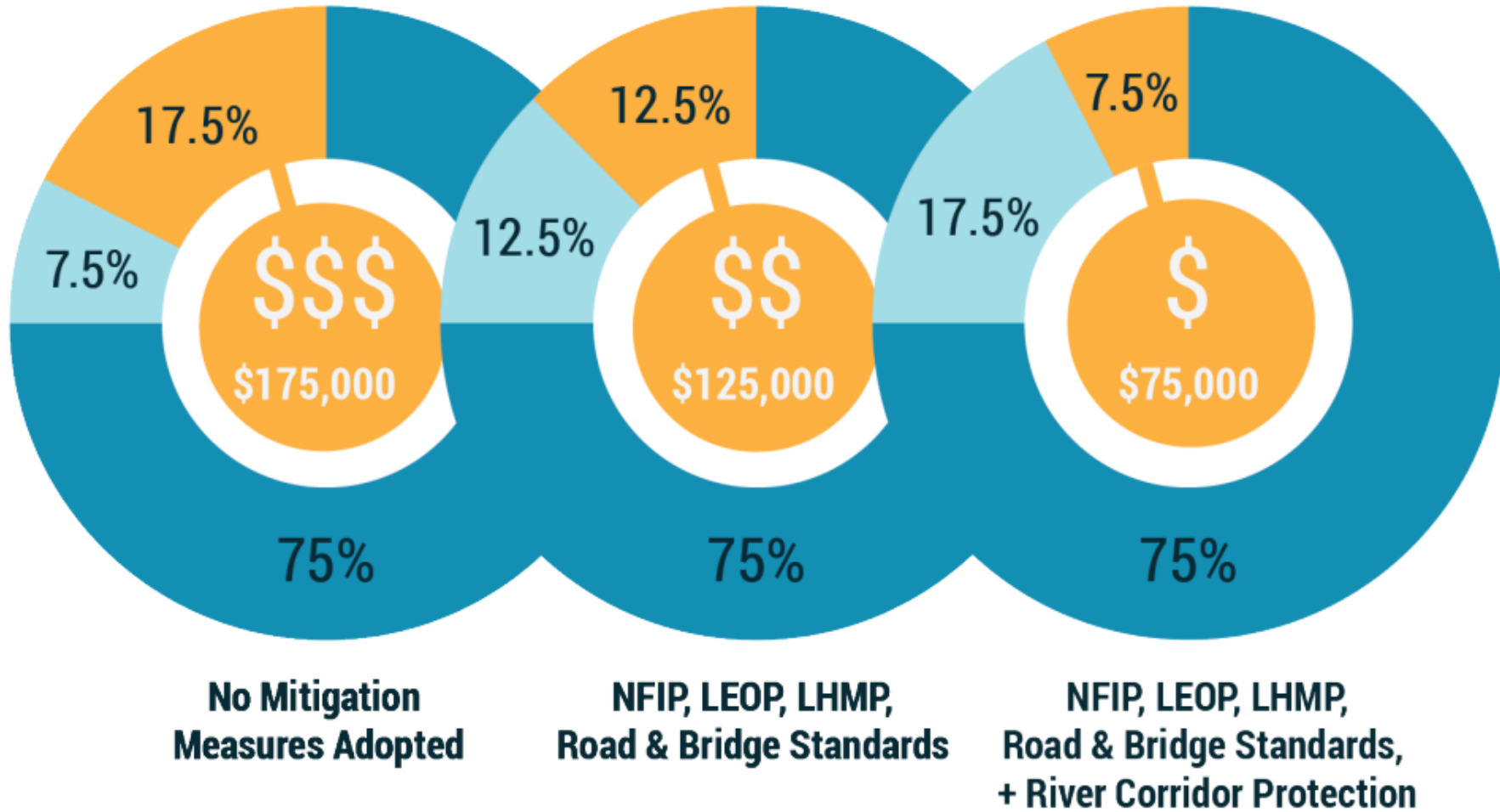
PERMITTED USES

- SMALL ACCESSORY STRUCTURES NO LARGER THAN 500 SQ. FT
- BUILDING ADDITIONS (50' DOWN RIVER SHADOW)
- UTILITY IMPROVEMENTS
- REPLACEMENT ON SITE SEPTIC SYSTEMS
- ACCESS AND PARKING FOR EXISTING USE
- ATTACHED DECKS OR PATIOS TO EXISTING STRUCTURES < 200 SQ. FT.
- UNIMPROVED TRAILS
- RIVER OR FLOODPLAIN RESTORATION PROJECTS



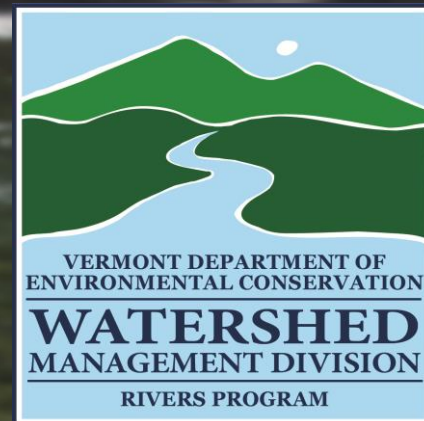
Emergency Relief and Assistance Fund (ERAF) Rates

Local State Federal



In the event of a \$1,000,000 recovery project, the dollar value shown would be the town's responsibility.

Kyle Medash
Western VT Floodplain Manager
Kyle.medash@vermont.gov, 802-490-6154



Visit:

▶ MORE INFORMATION

For complete details on Substantial Damage requirements, see FEMA's Substantial Improvement/
Substantial Damage Desk Reference Guide (P-758):

www.fema.gov/media-library/assets/documents/18562

For more resources for local officials, please go to
VTDEC's *After the Flood* website:



<https://dec.vermont.gov/watershed/rivers/river-corridor-and-floodplain-protection/after-a-flood>

For questions, please contact your local VT DEC
Regional Floodplain Manager at:



https://dec.vermont.gov/sites/dec/files/wsm/rivers/docs/floodplain_mgr_regions.pdf

Flood Ready Vermont (River Corridor FAQs, ERAP & MORE) :
<http://Floodready.Vermont.gov>

Vermont Rivers Program (Municipal Assistance):
<http://watershedmanagement.vt.gov/rivers/htm>